



Alberta Social Economy Wind Projects Next Steps Strategy¹

**Julie MacArthur
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¹ This paper is the third in a series detailing the context and background for community based wind projects in Alberta. Detailed citations and background information on many of the cases mentioned here are contained in papers 1, *Status of Social Economy Wind in Alberta*, and 2, *Best Practices in Social Economy and Community Wind*.

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Alberta Social Economy Wind Projects- Next Steps Strategy²

by Julie MacArthur

Introduction- Context and Research to Date

Wind power is one of the fastest growing electricity sources in the world. It is increasingly becoming a vital source of job creation, and is the most successful source of renewable electricity generation. The latter is particularly important given the challenge global climate change poses to conventional energy systems and sources. It is not without its detractors however, as demonstrated on April 28, 2010 opponents angry with wind farm developments in Ontario marched on Queens Park in Ontario. Local communities are far from unanimous in their support, financial or otherwise, for these developments. These tensions become increasingly important to understand as Canada's carbon footprint continues to grow and peak oil looms.

2009 was a record year for the development of wind power in Canada and it now occupies the 11th country spot in total installed capacity according to the World Wind Energy Association 2009 report. Total installed capacity in Canada is now at 3,319MW, which is up from 2,370MW at the end of 2008 (40% increase)³ and 1,770MW in 2007⁴. Every province now has some installed capacity (with the opening of Bear Mountain Wind Park in Dawson Creek, BC). Worldwide, installed wind capacity doubles every three years (WWEA 2009). According to a CanWEA press release "current provincial targets and policy objectives would result in a further quadrupling of installed wind energy capacity in the next six years"⁵.

The uptake and development of renewable energy projects is uneven across the country, however, as their success depends significantly on public policy and market structures in various jurisdictions. This uneven development also extends to the specific actors and ownership structures that are driving the renewables sector. In some places, such as Germany and Denmark, farmers and community-based organizations have played a significant role in wind development and ownership. In other countries, like Canada, the United States and Mexico, wind development is dominated by large-scale industrial developers.

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³ Canadian Wind Energy Association. 2009. Canada reaches milestone as wind energy now in every province. 2009 [cited December 30, 2009. Available from: http://www.canwea.ca/media/release/release_e.php?newsId=70.

⁴ Statistics Canada. 2009. Electric Power Generation, Transmission and Distribution 2007, edited by Manufacturing and Energy Division: Government of Canada.

⁵ CanWea. 2009.

Local involvement in energy projects is an important step in providing incentives for local change. This involvement needs to go beyond the level of 'consultation' and toward ownership and control. Some advocates of community power projects want them because state and corporate actors were not moving quickly enough toward renewable energy development. In this sense they are an entrepreneurial attempt to be first movers in energy innovations. Others are more concerned with ensuring economic development opportunities for citizens of affected areas. With wind this is an important consideration as the wind resource is free, and geographically tied to an area. Thus, it is just that citizens near a proposed project are given the opportunity to develop their own resource, rather than letting others do so. Developing wind projects thus becomes a foundation for 'community power', injecting much needed resources into community groups and local landowners.

As a result of these broader developments, the B.C. Alberta Social Economy Research Alliance (BALTA) has been working on a project over the past six months to understand the role that community and social economy actors can play in wind development and renewable energy in Alberta. The following strategy paper contains the results of a workshop the BALTA group hosted in Red Deer Alberta on April 28, 2010. Participants from the workshop came from a wide range of backgrounds: from ENGOs, Rural Electrification Associationss, Academia, farms, community developersand co-operative groups. During the first half of the event participants were presented with case studies of best practices from Germany, Denmark and other Canadian cases⁶ in Ontario and BC. We also covered different policy frameworks to encourage the diffusion of community-based renewables, particularly the Feed-in-Tariff structure.

Brent Kopperson, from the Windfall Ecology Centre and Pukwis Energy Co-op joined the group by teleconference to highlight the key features of how FITs facilitated their project and how they came about in the Ontario context. Steve Rison and Valerie Gilson also joined by phone to discuss the Peace Energy Co-op's role in the Bear Mountain Wind project of Dawson Creek, B.C. The workshop participants identified key assets and challenges for different forms of community mobilization as well as a roadmap for moving forward over the next 2-5 years.

Five Models of Community Wind Projects in Alberta

Community wind projects can take a number of forms. In the process of this research we have identified five main groupings. These are: (1) educational/mobilizational; (2) 100% community owned; (3) partnerships with municipalities; (4) partnerships with large (private) developers; and (5) first nations projects. Each of these makes specific contributions to both community

⁶ The cases mentioned within this paper are described in more detail in an earlier piece written for this project entitled: *Best Practices in Social Economy Wind*.

development and the uptake of renewable energy more generally. These models, and examples of them are examined briefly below.

Education and mobilization

Community based power has succeeded in jurisdictions through both a 'bottom up' and 'top down' process. Certainly policy supports created enabling financial conditions and a stable framework for development of wind projects. But what is clear in Denmark, Germany, and in Ontario is *that community mobilization played a key role in creating the policy changes, and in developing networks and constituencies to take advantage once the financials were there*. This contribution from community groups is critical, not only for policy change, but to demonstrate the feasibility of community projects and to engage the broader (sometimes skeptical) public. This education and mobilization role can be undertaken by either non-profit co-ops or community associations, or, by successful for-profit projects. Indeed, success is more likely when all types of organizations, representing a broad range of sectors (ngosNGOs, agriculture groups, community, first nations, etc) collaborate in their mobilization efforts..

One case of this was the Toronto Renewable Energy Co-op (TREC) in Ontario. It played a critical role in what is now a burgeoning community power movement in Ontario. What started with a few people in the city of Toronto has spawned a series of organizations and initiatives that formed the core of the Ontario Green Energy Alliance. It is important to note that first nations communities were key players in the coalition behind the green energy act in Ontario. Former TREC members are key players in the Community Power Fund, the Ontario Sustainable Energy Association. In addition, TREC spun off two for-profit energy projects: Windshare and Solarshare. Windshare is the only urban utility-size turbine in North America and is run as a partnership with Toronto Hydro. Solarshare is a co-operative that will build multiple rooftop solar- electric projects of up to 250kW in size, which it will finance, develop, maintain and operate

The Windshare project and TREC played a trailblazing role in the province, by inspiring other groups by both their successes and failures. They successfully got a turbine up and running. However, to do so was a long and painful process where the co-op ran up against legislative and regulatory hurdles. Their efforts in educating financial regulators led to an amendment to the *Ontario Co-operatives Act*. The network formed during this journey also traveled to communities around the province bringing their experiences and the potential of community based energy projects from Germany and Denmark.

Windshare is not alone in helping to develop the framework for other groups. Co-ops such as Baywind in the UK also have a mandate to nurture the growth of other organizations in their country. They created *Energy4All* as a financing and clearing house for information and help to get a community wind project up and running. They themselves were facilitated at their beginning by a corporate offshoot of Swedish wind co-ops. The movement aspect of these organizations is alive and well.

Finally, projects, once up and running, can play an important role in educating the broader public about their wind resource. Windshare runs tours throughout the summer for groups. In Germany, the Windenergiepark Udenhausen-Mariendorf holds community festivals in the summer. Closer to home, the Bear Mountain Wind Project in Dawson's Creek (initiated by a co-op) also plays an important role in drawing locals out to explore and familiarize themselves with this new (to many parts of Canada) technology.

Education- Movement building in Alberta

Workshop participants identified a number of assets to develop the social and institutional foundations for a community power network. They identified the following list of actors:

- Social and Religious Organizations
- Community Futures - local government funding
- Pathways to Sustainability
- Schools, Colleges, Universities
- Re-Think Red Deer
- Energy Engineers - Huge supply/expertise in Alberta
- Technology to Communicate
- Network of Experts and Speakers
- ACE Communities - Active, Creative, Engaged.
- Sierra Club
- Pembina Institute
- Alberta Environmental Network
- Sharing successes globally
- Municipal Councils
- Utilizing Funding and Program Opportunities
- Transition Towns

From this body of already existing actors, participants identified that a key to building the movement would be through both local networking and municipal and provincial lobbying efforts. These would be aimed at making solid economic and social arguments based on the community development/rural development potential of community-based wind in Alberta. Part of this could include partnerships with educational institutions to do local case studies and gather hard data, or the creation of 'living teaching labs' associated with Alberta's post-secondary institutions.

More networking needs to take place between different groups so that each community does not have to 'reinvent the wheel'. Furthermore, stronger links need to be developed between environmental and community development groups so that areas of mutual overlap can be identified. The Pembina Institute's reports such as *Greening the Grid*, provide valuable data on resource use and the overall picture of renewable energy options in the province. It is, however, focused at the macro

level so there is significant room for communities to take this information and add a local development spin.

The group's two year road-map was as follows:

1. Connect with Educational Institutions, Churches, NGOS - a Consortium, maybe a conference
2. Connect with/lobby Municipal Governments
3. Outreach to Citizens (films, speakers)
4. Identify Champions
5. Connect with Media (CBC, Access as two places to start)
6. Self-Education/Self-Action (including support groups of and for activists)
7. Industrial Relations, Consider all the stakeholders

100% community

Another mechanism for co-operative development of wind is through projects that are wholly owned by the communities in which they are situated. This level of local ownership does not yet exist in Canada, and many of the other community-based projects are, in fact, partnerships with municipalities. But in Germany the Windenergiepark Udenhausen-Mariendorf is owned completely by local farmers. On the 100% renewable island of Samso, Denmark, their onshore wind development is wholly owned by local farmers and co-operatives, where as the other (offshore) is partially owned by the municipality.

What is noteworthy about the 100% community projects is the significant farmer involvement. These actors tend to have land and capital with which to invest. Farmers are also historically used to investing in new technologies for survival, so they are seen as a core constituency for rural community-based wind development. This insight has clear implications for Alberta, and will be explored later in this paper.

100% community owned projects are important insofar as they illustrate that, in some cases, communities really can 'do it themselves'. They are also important in concentrating the benefits from community projects such as:

1. job creation
2. combats NIMBYism
3. local economic development
4. education

100% Community projects in Alberta

Alberta has a very strong network of co-operatives in the province. This is a key asset for the development of projects in the province since there already established networks and institutions that understand the importance of community/rural development. In addition to this, the Rural Electrification Associations (REAs) and

network of Natural Gas Co-ops in the province both have predominantly rural and farm based memberships. These constitute an important asset since these groups are both the political base of the current government. Furthermore, in many cases farmers are identified as a core group behind the successful development of community based wind (in Germany and Denmark, for example).

There are multiple reasons for the key role of farmers, but the two most important are that farmers have access to land and capital, as well as familiarity with investment in new technologies for stability/security/survival. The entrepreneurial spirit commonly found in farm-based communities is an important factor in the willingness to risk and the desire to own/control their own projects. In this vein, the Hutterite and Mennonite communities in Alberta were identified as important contributors to building 100% community based power. The United Farmers of Alberta is another group that may be interested in future projects.

The group participants identified the Alberta electricity system as both a challenge and an opportunity. The low market based prices of predominantly coal-based generation make wind projects unlikely to compete. In order to be profitable, the province would require a policy support mechanism providing a rate based on cost of generation, also known as a feed in tariff (FIT). A community wind project would need more than 10c a kwh to make a return, and the current price that generators are getting in Alberta ranges sometimes around the 3.5-5c range (consumers pay close to 8c). These prices fluctuate, and this variation also makes it very difficult for community projects to gain financing. This is because without a predictable contracted stable rate, the business case for the project is more difficult to finance.

One participant identified the profit margins of the private electricity retailers as a key opportunity for community based power. While these companies are large and able to secure windy sites and contracts more quickly/easily, they also have required higher margins than a community group would. This opens up an opportunity for community based windpower to contract directly with consumers at a rate only marginally higher than their current billing, an opportunity unique to Alberta's given its deregulated electricity market).

Three key challenges were identified. One is the policy support to help community projects succeed. In Ontario, New Brunswick and now Nova Scotia, provincial governments have enacted policies that single out community based wind development with higher rates, guaranteed grid access (in some cases) and financial support to do feasibility studies as well as low interest loans in some cases. All of these would be important in wide scale community power development in Alberta. In the absence of these, the next issue is grid access. In Alberta, the electricity grid is not owned by the province, but by private owners. It was identified that gaining access to sell to the grid may prove difficult. This may mean that trying to partner with local REAs is a good way to start. The one challenge with this is that most REAs only own distribution (smaller voltage) lines, and not medium, or transmission lines.

The final problem that was identified is the need for education on energy markets, both on pricing and profits as well as the environmental effects of 'dirty' generation. The education and mobilization role that needs to be played is vital to the success of any community based energy project. People need to understand the impact to the wallet can be positive, but this is only possible if the many inefficiencies (line loss, large profits to shareholders, etc) of the current structure are more broadly understood by ratepayers and communities.

It is important to note that the focus was on grid connected community projects, aimed at sale and not just production for use. In the latter case, the Alberta government has a net-metering program for micro-generation. If a farm wants to build a small turbine for their own consumption this is possible. If the generation significantly exceeds consumption though, the net-metering does not apply. It is also important to note that the variability and lack of storage capacity for wind means that you need to be connected to the grid. As one participant put it "unless you only want to watch TV when the wind blows". For these reasons, grid access is critical.

ROADMAP for Owner Utilized Resource System (OURS).

"Once you get the policy change which gets you contracts and revenue, a group like south alberta rea near pincher creek, this is perfect for them, so then you need the partner who might be the rea or gas coop that already has the membership to rally, educate them and they support that. Away you go." Workshop participant.

1. Education about financial and environmental costs. Real costs. Energy education. Develop a test case project and map the network.
2. Policy change through ballot box. Get policy support for community based energy, Feed In Tariff financing.
3. Strategic community partnerships and networking. Identify key wind areas where communities own or have access to the land (where developers don't already own). Feasibility studies for linking with distribution, transmission. Business plans.
4. Construction. Local jobs, maintenance, promote around the province.
5. Success.
6. More education.

Municipality partnership

The partnership with a municipality model is one that is common in many of the community wind best practice cases. Often pursued on a 50-50 basis, these partnerships help the co-operative or farmer organization manage risk, raise capital, and learn from the institutional expertise of their partner. Indeed, since many energy co-operatives are new, linking with an established organization makes for a far more appealing proposal for creditors. Beyond this though, a benefit from the municipal partnership route is that the project can be 'scaled up' beyond what the local community could raise on its own.

One example of this form is the Middlegrunden offshore windfarm outside Copenhagen, Denmark. The project is the largest offshore wind farm in the world, cost 48 million euro and consists of 20 2MW turbines. It is a 50-50 partnership between the city of Copenhagen and a large local co-operative with approximately 10,000 members. The community groups that partner in such large projects secure a number of things. One is a share in a fairly lucrative revenue stream. The economies of scale from the size of the project create financial benefits. These profits can then be used to either distribute surplus back to members, or to reinvest in other projects that the co-operative seeks to undertake. This creates a pool of capital in the community that can be very useful for any number of local development purposes.

Finally, these partnerships form an interesting model of civic engagement, where the citizens who are members of the co-op are directly engaged in decision-making over a major municipal development. This democratic experience could be very valuable in helping to strengthen participation and trust within an area.

Municipal partnerships in Alberta

The workshop group on community-municipality partnerships identified municipal customers, and the governance institutions of the municipality as important assets. For example, the municipalities have political clout to secure broader policy change. They also have financial resources and borrowing power as well as experience with, in some cases, generation of electricity. Finally municipalities are networked through, for example, the AUMA and the CFM. Through these networks they may have access to both best practices in other communities as well as broader funding pools.

Municipalities in Alberta can play a key role in the education of their citizenry through efficiency initiatives that eliminate waste. One participant pointed out that the relative affluence of the province has contributed to a lost sense of community and that we need to work on cooperation. Part of this involves educating citizens more about the role of electricity, to overcome their dissociation with where electricity comes from and the 'real costs' of generation.

Roadmap for municipal partnerships:

- Look for champions and communities that can be home to early wins. Which municipalities are most receptive to this? Could they be the home of test sites?
- Use education to develop the public's interest in locally produced – high efficiency power. With the public on side, get constituents involved to lobby municipal counselors.
- Create awareness of availability and increasing efficiencies of RE generation systems as they become available.
- Educate municipal governments about the economic development potential RE creates.

- Identify and promote municipal tools (e.g., encourage energy efficiency through property tax incentives).
- Identify and draw upon financial resources available from the municipality for energy
- The Association of Municipal Managers is a vehicle for sharing knowledge among CAOs (e.g., sharing by-laws). Use it as a vehicle for spreading awareness of tools and opportunities.
- Use informed champions from interested municipalities to participate in campaigns to influence MLAs and other provincial government decision makers.

Partnership with large private developer

The fourth form that community wind developments can take place is in a partnership with an (often much larger) private power developer. One reason communities choose to go this route is to avoid the risk associated with developing a project themselves. Another is if the group does not feel capable of undertaking the many processes of review, feasibility studies, turbine sourcing and all that goes along with developing a project to completion. If they are committed to developing green power, they may decide that it is more efficient to find others with prior experience to undertake this work. Finally, a community may feel that they are simply unable to raise all the capital themselves. For these reasons they partner with experienced developers and negotiate for some financial piece of the pie.

This partnership often involves community groups playing a key role in developing local support for a project and acting as a spokesperson for both local interests and the wind project. The 102 MW Bear Mountain Wind project in Dawson's Creek BC is an example of this particular structure. The project was initiated by the Peace Energy Co-operative, a group of local residents who wanted to take develop the local wind resource. They ruled out a small locally owned one turbine project because they wanted to fully utilize the potential of the wind on a local ridge. The Co-op formed a partnership with Aeolus power on Vancouver Island, and Aeolus partnered with AltaGas to actually develop the project. The co-operative received a 'finders fee' for the site and their work, along with Aeolus. They also followed through on a negotiated option to buy a share in the revenue stream by raising \$300,000 from their members. A confidentiality clause with AltaGas prevents the co-op from disclosing what the actual share is.

This structure can also play a key role in combating NIMBYism. The Peace Energy Co-op's Steve Rison highlighted how the Dokie wind project in Chetwynd, B.C. was vigorously opposed by locals while the Bear Mountain One went ahead. He specifically attributed the difference to the more direct community involvement (rather than ad-hoc consultation) as in the latter case.

Another example of a community-corporate partnership is the Baywind co-operative experience in Cumbria, U.K. A windpark was developed by a private

developer, the Wind Co. UK Ltd (itself a spinoff of a Swedish Co.op). The developer then gradually sold out its share of the development to the co-operative over time, as the local residents grew more familiar, comfortable, and saved money at their local financial institutions. This model insulates local and/or skeptical community members from risk, but also results in 100% community ownership. Of course, it is critical to note, that the private developer in this case was driven by a mandate to develop wind projects for the *purpose* of divesting to the community.

Partnership with Big Business in Alberta

In Alberta, the land base is owned by private actors and by the municipalities. The wind resource does not pay attention to artificial boundaries and, as such, partnerships are an important structure for developing the resource. Large businesses bring a number of assets to the table in a partnership. They are usually interested in additional investment opportunities. For wind developers like the EPCOR's Capital Power Corporation, there is already familiarity with the development process. A partnership with a community can facilitate planning approval, which is one of the most time consuming and frustrating parts of the process for a developer. In addition, public private partnerships (PPPs) are an increasingly popular way for governments to offload the investment in service provision to the private sector. Consequently, partnership with large businesses falls easily within mainstream political culture in Alberta.

Credit Unions and the Treasury Branch are both important potential financial partners for the projects and they can take advantage of a number of external resources, such as: wind resource maps, Natural Resources Canada, Universities, Federation of Canadian Municipalities (FCM) (\$350,000 max), Alberta Rural Economic Development Fund (\$500,000 max)

The workshop participants were unsure if the co-operative legislation in Alberta allows for this kind of partnership structure, or is compatible with wind power development. They also identified volunteer burnout as an important issue, given the long lead-times needed to develop a wind project. As such, a partnership with a larger organization can help ameliorate the effects of this. Of course, finding angel investors and corporations (as in the Baywind case) that are interested in community based wind projects and are willing to gradually sell out the projects to local groups post-development is ideal.

Roadmap: Community Power Project that Partners with Big Business

1. Access wind mapping data to determine if the community/region in focus has good wind (Seek technical information and assistance: NRCan, universities)
2. Feasibility Study: 2 years: funding options: FCM (Green Municipal Funds); Community funded; community-corporate funded; corporate funded

3. Educate and gather the community team together: same 2 years as feasibility study (as the data starts to roll in): rural community, local governments, Financial partners (Credit Union/Treasury Branch), assistance from outside resources (NRCan, etc.)
4. Defining and establishing the community business structure (seek information and resources), getting local investment (during the above 2 year period): examples: Cooperative (New Gen?), Municipally owned corporation, or County/Regional incorporation.
5. Defining what's needed from corporate involvement – talking with other communities having done similar things, possibility bringing in a consultant to help
6. Finding and anchoring suitable Corporate partnership: Industry: construction e.g., Graham, PCL; Utilities: Epcor, Enmax, Suncore
7. Building and maintaining the wind power project

First Nations/Aboriginal

Finally, First Nations and Aboriginal groups can play a key role in developing community based power. There are a number of resources that are specifically available to First Nations that may provide a supportive framework for this type of development. In Alberta, some first nations own their own electricity distribution networks (REAs), which provides opportunity foundation on which to build. In addition, First Nations developments are exempt from some of the regulatory hurdles that face other communities, since they fall under federal jurisdiction.

These initiatives can take the form of partnerships with municipalities and with co-operatives in order to spread some of the project risk and financing among a range of actors. For example, the Weatherdancer turbine on Piikani Nation land in Southern Alberta was a partnership between Edmonton's EPCOR utility and the Piikani Nation. While the project ran in to difficulty and is now wholly owned by EPCOR it does set the stage for more exploration of this type of model.

A very recent project is the Pukwis wind park. It is a joint project between the Chippewa Georgina Island and Pukwis energy coop. They recently (April 28, 2010) signed a 157million, 20 year contract with Ontario Power Authority under the new Feed-in-Tariff framework. It is a fully community project, as the co-op is a joint project between the first nation and the windfall ecology centre. The revenues from this project can be used to develop further projects, or re-circulated through the community for other purposes.

First Nations in Alberta

The workshop participants identified a number of opportunities and limiting factors in the province. A key issue was the nature of the partnerships and projects. For

example, in the case of the Piikani Nation, the experience was not one where the community felt adequately consulted. A distinction was drawn between the participation of powerful and/or confident members of a community versus wider ranging buy in and participation. It is important to make sure that a tiered system within the community does not take place. The key for First Nations is communication, knowing and understanding. There is a long history of first nation communities (and communities more generally) been talked down to, informed, rather than *involved*. Once the community gets involved, another important lesson is to keep them involved.

The Piikani Nation is situated in an extremely wind turbine-dense part of the province and now has the large AltaLink transmission line projected to run through the reserve. As one participant put it "When you're driving through our reserve, all we see are those big 240kV towers. You used to be able to see the mountains, and now there is only wind turbines".

When it comes to wind power project, the biggest asset any first nation, or any community or cooperative based project has, is the land. The reserve had an employment liaison, to get local workers ticketed and on the project. Many other wind parks are projected to be developed in the area soon, so the resource is strong. The band is presently dealing with a partner out of Winnipeg, and is interested in building a project. Just waiting for green light from Chief and Council. One participant suggested it may involve as many as 100 turbines.

In addition to land, another key asset the some first nations communities bring to wind power potential is project development experience. A third is access to different sources of financing and support, sometimes through the federal government. One participant brought up the Rural Community Adaptation Program. Accepting proposals for community projects - this includes First Nations - up to \$500,000. Of that money, 90% non-capital is covered, and 50% capital is covered. This is for people costs and feasibility studies for rural communities (not municipalities). December will be the last round, and they are taking ongoing applications.

One resource for first nations are groups like the Pembina institute who have conducted a number of community energy plans with First Nations, including initial data on wind power capacity in some territories. They have technical knowledge of the electricity sector in Alberta, and are very engaged in renewable electricity development. The key is for these community plans to be done in co-operation with the community, so that education and capacity building can take place.

Multi-band collaboration is another important potential avenue in Alberta. Participants argued that more meetings like this in the future will benefit the Aboriginal and First Nations communities, and help facilitate ways for aboriginal and non- to work toward common goals. Indian and Northern Affairs Canada is in fact encouraging greater multi-nation/regional approaches to economic development. Another opportunity is to take advantage of the fact that some First

Nations communities own their own REAs. For example, Piikani Nation and Ermineskin own their own REA. More work needs to be done on examining how REAs can be used to facilitate community based projects, what kind of mutually beneficial partnerships can be arranged.

The specific governance issues of first nations groups are also important. Reserve lands are under federal jurisdiction. Larger traditional territory lands are within provincial jurisdiction. When on the land, Band Council Resolutions (BCRs) are the key document to move forward on anything. When it comes to their lands, that BCR is the political instrument allowing progress on a project.

Strategic Roadmap for First Nations Projects:

1. Develop a First Nations Green Energy Alliance.
2. Conduct Community Energy Plans and identify document the wind resource. All of that takes money. Right now there is now ay to allocate those funds. It is \$500,000 - \$1,000,000 to get to the point of talking to a developer. There's the shortness of the political cycle.
3. Education. In Ontario energy housing retrofits on reserve played a key role in getting into people's homes and increasing efficiency. There is funding for this that is easy to access. Through the retrofit programs, broader ban membership starts thinking about enegy savings and the conversation, setting the foundation and interest in pursuing renewable energy porjedcts This started in one community then moved to six, now it is all across Ontario. Brent Kopperson and Windfall Energy Centre is open to sharing their process with any first nation groups.
4. Job development. This can take place through housing retrofits, through specific arrangements with development partners, and a variety of other ways. This forms a key part of the direct financial benefit (immediate) to the community.
5. Trilium foundation - a national foundation in supporting projects who may be open doing a cross Canada initiavei on First Nation Renewable EnergyThis could begin as renewable energy audit, followed by feasibility studies which contrast the effects of difference policies on wind across the country.Do it cross-country and then the policy pieces move across. Double win.
6. Link the various first Nations going for funding this year for renewable energy, to get on the same page first so we can leverage the funds (funds are shrinking and becoming more regionally-focused)

Conclusions

The work on developing these 5 models of community development is far from comprehensive. It was a first attempt at bringing together key stakeholders and building the knowledge and capacity required to facilitate community windpower projects in Alberta. While there are key differences between each structure, some overlapping themes have emerged from the discussions on each.

First, there is money in Alberta, in communities, with municipalities, the province and at the federal government level. One participant made the point that if there is 2 billion for carbon capture and storage (CCS), why not renewable energy. Each group pointed to the key role that building the political will to redirect/direct these funds is a critical component in supporting the development of community wind-power. Funds that are already available, such as the Rural Community Adaptation Program outlined in the preceding section, can be leveraged to educate and develop both understanding and other projects. Home retrofits are another way to leverage existing funds to help build the foundation for community power in the future.

Second, each group stressed the key role that movement-building and education needs to play. While wind projects themselves serve a key role in breaking down stereotypes about both community projects and renewable energy, a great deal of leg-work goes in to networking before these projects are shovel ready. Workshops like the one we had in Red Deer, or like the Pembina Power Wedges forum and the work of RePower Red Deer are playing important roles in making the links necessary to build a broader movement.

Third, a strategic plan for developing community wind projects needs to pick up on issues and build rhetorical frames based on what is important to Albertans. For example, the transmission line ALTAlink is provoking a great deal of backlash due to what is perceived as a lack of community consultation, and an increase in costs to consumers. This lack of democratic control (real or perceived) is an opportunity to open up a discussion about the forms of governance that Albertans want for their electricity sector. This conversation was seen as key throughout the workshop to enable a more accurate measurement of the 'real costs' of electricity generation.

Fourth, the economic case for these community projects needs to be developed. This is vital if the farm based groups that were so important to developing wind in Europe are going to get involved. That means running a number of different scenarios and business cases to test where the markets are for buying wind power in the province at a rate that provides a return to the community (i.e. above the spot price). This may involve securing procurement contracts with groups (like municipalities) who want to lower their carbon footprint and buy green power.

Fifth, a cross-section of key groups needs to be at the table moving forward. Here is a preliminary list (in addition to those at the workshop in Red Deer):

1. Rural Electrification Associations in the Province of Alberta.
Alberta Department of Energy (Jeff Bell?)
2. Pembina Institute (Tim Weis ?)

3. EPCOR (Someone who has actually partnered with a First Nation to do a turbine)
4. Indian and Northern Affairs Canada (Gerald Crick).
5. Natural Gas Co-ops
6. Southern Alberta Renewable Energy Partnership (Tim).
7. Trillium. We would have to propose a project.
8. Blood Tribe - proposing to do some wind turbines.
9. AIIC? AVAC?
10. VC
11. Municipalities.
12. Credit Unions
13. Hutterite and Mennonite Communities
14. Researchers to do business plans and case studies
15. Alberta Rural Development Agencies
16. ACCA

Finally, this strategic plan needs to take the long view and recognize that movement building is a long process of development. This process took over 10 years in Ontario to get to the point where supportive legislation was enacted. There was a significant amount of resistance from within the energy sector bureaucracy, as well as from the financial regulators. In Europe, these developments came after significant shocks in oil prices and after many years of community based mobilization on other fronts. The key point in all of this research is that there is a key opportunity opening up with an overlap of groups working on economic security, renewable energy, peak oil, transition towns and a wide range of other complimentary projects. These projects are possible, on a large scale and in jurisdictions, like Alberta, that many would predict failure. Albertans have a very long history in their co-operative and community based organizations in co-ordination and entrepreneurship, it is time to take advantage of it.

Additional resources:

1. www.windworks.org
This excellent website is a treasure trove of information on the forms of and rationale for community-based wind development. It is run and maintained by Paul Gipe, an expert in community based wind developments and a key figure behind what is now the Ontario Green Energy Act. It contains sections relevant for both practitioners and academics, comparing different models and policy supports. A great starting point to understand the range of options out there, and latest developments in community based wind.
2. www.cec.org/Storage/57/4933_QA0608_Guide_Community_RE_en.pdf OSEA
The Commission on Environmental Co-operation developed this excellent guide to developing a community energy project in North America. It includes a business plan, funding sources and a very detailed overview of what is involved in the process.

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